ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	)	ET Docket No. 00-258
	)	
Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000	)	RM-9920
	)	
Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	)	RM-9911

COMMENTS OF
THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

The Personal Communications Industry Association ("PCIA")[1] hereby submits these comments in response to the *Notice of Proposed Rulemaking* ("*NPRM*") adopted by the Commission on December 29, 2000, in the above-captioned proceeding.[2]

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[1] PCIA is a wireless communications association dedicated to advancing seamless global communications through its strategic marketing, public policy expertise, events and educational programs. PCIA members include a broad base of interdependent mobile convergence players. PCIA is devoted to the rapid, efficient, and cost effective deployment of consumer-driven mobile products and services around the world. PCIA's membership alliances include the Personal Communications Service Alliance, the Mobile Wireless Communications Alliance, the Paging and Messaging Alliance, the Private System Users Alliance, and the Site Owners and Managers Alliance. PCIA's Frequency Coordination and Microwave Clearinghouse divisions give it unique expertise in spectrum management services and have made it an industry leader in representing and serving the interests of tens of thousands of FCC licensees.

PCIA commends the Commission and the National Telecommunications and Information Administration ("NTIA") for their aggressive efforts to identify radio frequency spectrum below 3 GHz to be used for the provision of advanced, high-speed wireless services including the suite of services that defines third generation ("3G") offerings. Demand for advanced wireless products – especially those capable of combining the functions of the Internet and the ubiquity of wireless communications, as promised with 3G – is well documented. It is equally clear, however, that in order for U.S. carriers to satisfy this demand and compete effectively in the global marketplace, a well-informed allocation decision must be made and implemented promptly. To this end, PCIA suggests that, in reviewing the comments filed in response to the *NPRM* and settling on an allocation decision, the Commission remain mindful of: (1) the importance of allocating sufficient spectrum to satisfy projected consumer demand for advanced wireless products and services into the next 10-15 years; (2) the benefits of ensuring that the U.S. and other countries' allocations are harmonized, to the greatest extent possible; and (3) the need to stay on course so that an allocation decision can be made this summer and licenses can be auctioned no later than September 30, 2002, as currently envisioned.

I. Background

Due to its role as a frequency coordinator and microwave relocation clearinghouse, PCIA is well versed in matters involving spectrum management and planning. PCIA is also extremely

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[2] *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems,* ET Docket No. 00-258, *et al.,* (rel. Jan. 5, 2001) (Notice of Proposed Rule Making and Order).

familiar with the issues facing the global wireless industry: many of the world's leading wireless companies are PCIA members or customers. Most of these companies are currently providing first and second generation wireless services and many plan to offer advanced third generation services in the near future.

To help address the issues facing global wireless companies, PCIA recently formed the "PCIA Global Initiative." The objective of the Global Initiative is to assist global wireless operators in maximizing their market potential by bringing key interdependent players in the mobile convergence marketplace together and providing them strategic tools for developing consumer-driven products and services. Allocation of spectrum for advanced 3G and other future wireless products and services world-wide is a critical element of this process.

PCIA has been an active participant in 3G spectrum planning since early preparations began in advance of WRC-2000.[3] More recently, PCIA has participated in the 3G spectrum planning process through its membership in the Wireless Spectrum Coalition and a joint industry association group with the Cellular Telecommunications and Internet Association ("CTIA") and the Telecommunications Industry Association ("TIA"). Last November, these joint associations submitted a letter to FCC Chairman William E. Kennard and NTIA Director Gregory L. Rohde providing an outline of key recommended principles to guide the identification of spectrum for deployment of 3G services. In December of last year, the joint associations followed up with a

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[3] PCIA was actively involved in U.S. Task Group 8/1, which was chartered by the ITU to study the spectrum requirements for IMT-2000. As part of that process, PCIA completed a market demand forecast for the terrestrial services component of IMT-2000, which was filed with the Commission as an attachment to PCIA's September 30, 1998, comments in response to the Commission's August 26, 1998, Public Notice exploring 3G issues in preparation for WRC-2000.

letter to Chairman Kennard and Mr. Rohde establishing a detailed work program to assist the government in completing the technical evaluation of various candidate bands for 3G. PCIA is also participating in the instant proceeding through joint comments being filed today by the industry association group (CTIA, TIA, and PCIA). Those comments and a report attached to them outline several specific solutions aimed at satisfying the communications requirements of all parties affected by the 3G allocation process, including both incumbent users and 3G proponents. As detailed below, in the instant comments, PCIA suggests three key principles to guide the Commission's review of the record generated in response to the *NPRM* and the selection of optimal frequency bands to support provision of advanced wireless offerings.

II. The Commission Must Remain Mindful Of Certain Key Spectrum Management Principles To Ensure That Third Generation Wireless Offerings Reach Their Full Potential

Overview of 3G Capabilities. Provision of high-speed, high-bandwidth third generation services will permit consumers to enjoy the full array of Internet capabilities on a wireless device. To this end, the principal promise of 3G technology is that it will bring together the best of the Internet and the best of wireless services in a high-speed, effective, consumer-friendly fashion. In effect, this means access to capabilities as yet barely imaginable. For example, 3G technologies promise to increase the speed at which data travels over the air by 7 to 40 times and to allow transmittal of broad streams of data, enabling wireless handsets to act as "mini PCs," with full length e-mail and high-speed video capabilities. According to the Council of Economic

Advisors, "[t]he new mobile handset will become the single, indispensable 'life tool,' carried everywhere by everyone, just like a wallet or purse is today."[4]

Although today's Wireless Application Protocol ("WAP") permits Internet access through wireless devices, the relevant data rate speeds are low, typically ranging from 9.6 kbps to 19.2 kbps. As mentioned above, implementation of 3G networks will improve these data rates dramatically. International Mobile Telecommunications-2000 ("IMT-2000"), the initial standard for 3G wireless services adopted by the International Telecommunication Union ("ITU"), calls for system capabilities to support circuit and packet data at rates up to 2 Mbps for indoor traffic, 384 kbps for pedestrian traffic, and 144 kbps for high-mobility (vehicular) traffic.[5]

These data rates, along with other attributes of IMT-2000,[6] are expected to support a wide range of high-speed, high-bandwidth services, including high-quality voice communications; enhanced messaging services; switched data products such as Internet browsing and electronic commerce; asymmetrical multimedia services such as digital-quality audio/music, high-resolution full motion video content, and remote security surveillance; symmetrical multimedia services such as video phone and interactive video-conferencing; and Phase II services that will include large video data file transfers, among other things. With the introduction of these new services, analysts expect 3G offerings to be provided from a wide diversity of devices, ranging

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[4] James H. Johnston, *The Next New Think, Third Generation Wireless*, Legal Times, Jan. 15, 2001, at 25 (internal quotation omitted).

[5] *See NPRM*, ¶ 17 and Table 1.

[6] Other key attributes of IMT-2000 include interoperability to facilitate global roaming, common billing/user profiles, capability to determine and report geographic positioning of mobiles, and the ability to support multimedia services, such as bandwidth upon demand and asynchronous data transmission. *Id.*

from cellular phones to messaging devices to pocket PCs to parking meters as well as interaction with consumer appliances.[7] Third generation wireless services are expected to have a tremendous beneficial impact on the economy in general – in addition to affected wireless industry participants – by allowing consumers enhanced access to information and by enabling them to make bookings and purchases and complete transactions anytime, anywhere.[8] Simply put, the potential benefits of 3G products and services to the wireless industry, business and private consumers, and the economy as a whole are far-reaching and tremendously significant.

The decisions made by the Commission in the 3G allocation process are critically important because they will serve as the foundation for the development of 3G services in the United States. Accordingly, as the Commission moves forward with the 3G allocation process, PCIA suggests that it keep in mind the following guideposts:

Allocate Sufficient Spectrum To Meet Consumer Demand. As the Commission is aware, allocation of additional spectrum is essential in order for 3G services to reach their full potential. As it attempts to make a final decision with respect to the allocation process, it is imperative that the Commission allocate a sufficient amount of spectrum to support the full array of 3G products and services and to satisfy projected consumer demand for advanced wireless offerings over the next 10-15 years. That demand is expected to be significant. Some analysts predict that, in the U.S., mobile data will achieve a population penetration rate of nearly 60

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[7] *See, e.g.,* Dan Balaban, *A New Era For Smart Cards*, American Banker-Bond Buyer, Vol. 2, No. 2, Feb. 1, 2001, at 49.

[8] *See generally* The Council of Economic Advisers, *Economic Impact of Third-Generation Wireless Technology*, Oct. 2000, at 6.

percent by 2007, up tremendously from an existing rate of approximately 2 percent.[9] This anticipated growth is attributed to anticipated aggressive deployment of high-speed services in the U.S. Current estimates predict that worldwide, there will be some 730 million wireless Internet subscribers by 2005.[10] Demand estimates on both the domestic and international level are likely to continue very strong growth in the decade 2010-2020.

To meet anticipated demand for advanced wireless products and services, including 3G offerings, it was determined at WRC-2000 that further spectrum, in addition to the 170 MHz identified for terrestrial 3G wireless services at WRC-92, would be required. In fact, Resolution 223 adopted at WRC-2000 found that ITU studies demonstrate the need for approximately 160 MHz of spectrum in addition to that identified at WRC-92 *and* in addition to the spectrum already being used for first and second generation wireless services in the three ITU regions.[11] In view of the tremendous usage projections expected for advanced wireless products and services, PCIA urges the Commission to evaluate the record with an eye toward assuring the allocation of sufficient spectrum to satisfy not only short-term demand for 3G and other similar offerings, but also long-term demand projections looking forward into the next 10-15 years. This is likely to require a new allocation of *at least* 160 MHz, as identified in Resolution 223.

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[9] *See Mobile Data Penetration To Be Nearly 60% By 2007,* Press Release, The Strategis Group, Jan. 22, 2001, available at http://www.strategisgroup.com/press/pubs/res_hs.htm.

[10] *See Internet Users Will Surpass 1 Billion Worldwide in 2005*, (Feb. 7, 2001), available at http://www.europemedia.net/shownews.asp?ArticleID=1396.

[11] *Provisional Final Acts of the World Radiocommunication Conference* (Istanbul, WRC-2000), Resolution 223, § h.

Along these same lines, the 3G spectrum allocation must be made in large, contiguous blocks in order to permit deployment of 3G technologies. In evaluating potential 3G spectrum bands, the Commission should evaluate carefully the evidence in the record concerning the amount of contiguous spectrum necessary to permit effective deployment of the full array of advanced 3G offerings.

Harmonize The U.S. Allocations With Allocations Around The World. As discussed in prior pleadings filed individually by PCIA as well as joint filings with the industry association group, it is also imperative that the Commission endeavor to harmonize, to the greatest extent possible, spectrum allocated in the U.S. for deployment of 3G services with 3G spectrum allocations around the world.[12] A global approach to 3G will benefit consumers by facilitating increased world-wide roaming opportunities and by permitting expanded interoperability between U.S. networks and those in other countries. In addition, promoting a global 3G market will allow manufacturers to take advantage of economies of scale, leading to lower equipment costs. Lastly in this regard, improved global telecommunications capabilities will serve important world-wide public interest objectives by minimizing the potential for "technological divides" based on "information haves and have nots."

Prompt Commission Action Is Critical. Finally, it is critical that the Commission stay on course with its schedule to select frequency bands for 3G by this summer and to begin auctioning licenses for 3G spectrum no later than September 30, 2002. It is by now well documented that the United States is lagging behind in terms of the development of 3G

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[12] *See, e.g.*, Comments of the Personal Communications Industry Association, Report No. IN 98-48, at 3, 12 (filed Sept. 30, 1998).

systems because no specific 3G allocation has been made in this country. Licenses for 3G services have already been awarded in several European countries, including Finland, the United Kingdom, Spain, Germany, Italy, the Netherlands, and Sweden, to name a few, as well as several countries in Asia, including Japan and South Korea. Japan is expected to be the first country in the world to introduce 3G service, with May, 2001, as the currently-scheduled launch date.[13] Industry analysts expect Hong Kong, South Korea, and China to follow closely behind.[14] Europe is expected to begin offering 3G products in 2002, followed by the U.S., which, analysts predict, will likely launch 3G service between 2003 and 2005.[15] Thus, although the Commission's *NPRM* proposing possible frequency bands to be used for deployment of advanced wireless offerings represents an essential and significant first step. Time is of the essence since service rules and auction rules for the spectrum remain to be proposed and implemented. The U.S. already trails European and Asian governments in allocating sufficient spectrum for new broadband services by several years, and at least some analysts have expressed concern that this deficit may put the country at a distinct disadvantage vis-à-vis global competitors. Accordingly, PCIA urges the Commission to stay on course and complete the licensing process as promptly as practicable.

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[13] *See, e.g.,* Eric Glick, *U.S. Looks To Asia For Wireless 'Net Leadership,* Wireless Week, Dec. 18, 2000, at 52.

[14] *Id.*

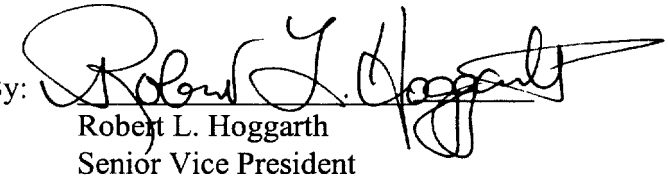
[15] *See, e.g.,* Mark Hamblen, *3G Wireless,* Feb. 21, 2000 (estimating that Japan will be the first to launch an advanced 3G system early in 2001, followed by Europe in 2002 and the U.S. between 2004 and 2005); *see also Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, FCC 00-289, at 38 (rel. Aug. 18, 2000).

III. Conclusion

PCIA applauds the efforts of the FCC and NTIA to identify and select appropriate frequency bands to support the provision of advanced wireless products and services, including third generation wireless offerings. The activities of both agencies reflect an awareness of the importance of 3G technologies to the global communications marketplace and the role of the U.S. wireless industry in it. In moving forward with the selection of frequency bands for 3G deployment, PCIA urges the Commission to remain mindful of the importance of an allocation sufficient to support demand for 3G technologies; the need for facilitating global harmonization of 3G spectrum, to the greatest extent possible; and the urgent requirement for prompt Commission action.

Respectfully submitted,

Personal Communications Industry Association

By: 

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